

Amendments to the Claims

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

1. (Currently Amended) An optical reproducing device comprising:

predetermined length mark signal measurement means for measuring reproduction signal characteristics respectively of a short reproducing power control mark and of a long reproducing power control mark from information data that is recorded throughout a data recording area of a sector of an optical recording medium; and

power control means for controlling reproducing power of a light beam based on the measured reproduction signal characteristics of the short and long reproducing power control marks,

wherein the predetermined length mark signal measurement means is further operable to detect a specific pattern including therein an arrangement of a plurality of short reproducing power control marks from amongst a bit arrangement pattern of the information data in the data recording area, and when the specific pattern is detected, to measure the reproduction signal characteristic of short reproducing power control marks, the measured reproduction signal characteristic of short reproducing power control marks corresponding only to the plurality of short reproducing power control marks included in the specific pattern.

2. (Previously Presented) An optical reproducing device comprising:

predetermined length mark signal measurement means for measuring reproduction signal characteristics respectively of a short reproducing power control mark and of a long reproducing power control mark recorded throughout a data recording area of a sector of an optical recording medium;

power control means for controlling reproducing power of a light beam based on the measured reproduction signal characteristics of the short and long reproducing power control marks;

wherein the predetermined length mark signal measurement means includes:

data reproduction means for reproducing information data bits from a reproduction signal of the optical recording medium;

comparison means for comparing a bit arrangement pattern of the information data reproduced by the data reproduction means with a specific pattern including an arrangement of a plurality of short reproducing power control marks, and for detecting a coincidence of the specific pattern of the plurality of short reproducing marks in the bit arrangement pattern of the information data; and

signal measurement means for measuring the reproduction signal characteristic of information data bits corresponding to the plurality of short reproducing power control marks, when the comparison means detects the bit arrangement pattern of the information

data coincides with the specific pattern including the plurality of short reproducing power control marks.

3. (Original) The optical reproducing device of claim 1, wherein:

the short reproducing power control mark is a mark having a length of $2T$ (where T is a channel bit length), and the specific pattern is constituted by a pattern having a length arrangement of mT $2T$ $2T$ nT (where m and n are predetermined positive integers).

4. (Original) The optical reproducing device of claim 2, wherein:

the short reproducing power control mark is a mark having a length of $2T$ (where T is a channel bit length), and the specific pattern is constituted by a pattern having a length arrangement of mT $2T$ $2T$ nT (where m and n are predetermined positive integers).

5. (Original) The optical reproducing device of claim 3, wherein $m = n = 2$.

6. (Original) The optical reproducing device of claim 4, wherein $m = n = 2$.

7. (Original) The optical reproducing device of claim 1, further comprising reproduction condition control means for controlling a reproduction condition based on the measured reproduction signal characteristics.

8. (Original) The optical reproducing device of claim 2, further comprising reproduction condition control means for controlling a reproduction condition based on the measured reproduction signal characteristics.

9. (Original) The optical reproducing device of claim 3, further comprising reproduction condition control means for controlling a reproduction condition based on the measured reproduction signal characteristics.

10. (Original) The optical reproducing device of claim 4, further comprising reproduction condition control means for controlling a reproduction condition based on the measured reproduction signal characteristics.

11. (Original) The optical reproducing device of claim 5, further comprising reproduction condition control means for controlling a reproduction condition based on the measured reproduction signal characteristics.

12. (Original) The optical reproducing device of claim 6, further comprising reproduction condition control means for controlling a reproduction condition based on the measured reproduction signal characteristics.

13. (Previously Presented) The optical reproducing device of claim 7, wherein:

the predetermined length mark signal measurement means includes a division circuit arranged to measure a ratio between amplitude values of the short and long reproducing power control marks; and

the reproduction condition control means controls the reproducing power of the light beam so that the measured amplitude ratio gets close to a target value.

14. (Previously Presented) The optical reproducing device of claim 8, wherein:

the predetermined length mark signal measurement means includes a division circuit arranged to measure a ratio between amplitude values of the short and long reproducing power control marks; and

the reproduction condition control means controls the reproducing power of the light beam so that the measured amplitude ratio gets close to a target value.

15. (Previously Presented) The optical reproducing device of claim 9, wherein:

the predetermined length mark signal measurement means includes a division circuit arranged to measure a ratio between amplitude values of the short and long reproducing power control marks; and

the reproduction condition control means controls the reproducing power of the light beam so that the measured amplitude ratio gets close to a target value.

16. (Previously Presented) The optical reproducing device of claim 10, wherein:
the predetermined length mark signal measurement means includes a division circuit arranged to measure a ratio between amplitude values of the short and long reproducing power control marks; and

the reproduction condition control means controls the reproducing power of the light beam so that the measured amplitude ratio gets close to a target value.

17. (Original) The optical reproducing device of claim 11, wherein:
the predetermined length mark signal measurement means measures a ratio between amplitude values of the short and long reproducing power control marks; and
the reproduction condition control means controls the reproducing power of the light beam so that the measured amplitude ratio gets close to a target value.

18. (Original) The optical reproducing device of claim 12, wherein:
the predetermined length mark signal measurement means measures a ratio between amplitude values of the short and long reproducing power control marks; and

the reproduction condition control means controls the reproducing power of the light beam so that the measured amplitude ratio gets close to a target value.

19. (Previously Presented) The optical reproducing device of any of claims 1-6, wherein:
a plurality of short and long reproducing control marks are recorded in the optical recording medium;

the predetermined length mark signal measurement means measures the reproduction signal characteristics corresponding to each short reproducing mark and calculates an average value using the measured reproduction signal characteristics.

20. (Previously Presented) The optical reproducing device of any of claims 13-16, wherein:

the predetermined length mark signal measurement means calculates an average value for each of the short and long reproducing marks using the measured reproduction signal characteristics; and

the reproduction condition control means controls the reproducing power of the light beam so that the calculated amplitude ratio based on the average amplitude values approaches a target value.